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DOI: https://doi.org/10.1037/a0030738

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The preparation of this article was supported by a grant from the Polish Ministry of Science and Higher Education (Project "Sociological and psychological determinants of rapid social changes", Principal Investigator: Jacek Wasilewski) and the German Research Council (Project "Psychosocial resources and coping with social change", Principal Investigator: Rainer K. Silbereisen; this project is part of the Collaborative Research Center SFB 580 "Social developments in post-socialist societies: Discontinuity, tradition, structural transformation").

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Abstract

Religiousness has been found to act as a protective factor against the adverse effects of stressors originating from a variety of sources. Despite ample precedent in sociological theories of religion, however, the potential stress-buffering role of religiousness in relation to stressors arising from macro-level societal trends has not received empirical scrutiny. Recent psychological conceptualizations of social and economic change suggest that such change manifests itself in people's lives in the form of perceived demands that act as individual-level stressors and impinge on subjective well-being. Building on this line of research, we examined whether religious attendance and subjective religiosity buffered the negative association between perceived work-related demands of social change and depressive symptoms, life satisfaction, and work satisfaction in a sample of N = 1,581 Polish adolescents and adults aged 16-46 years. Analyses revealed that both dimensions of religiousness were positively related to subjective well-being and buffered the impact of work-related demands on depressive symptoms. Contrariwise, no buffering effect of religiousness on either life or work satisfaction was found. Taken together, results partly confirm religiousness as a protective factor for subjective well-being in relation to social and economic change but underscore the importance of taking the multifaceted nature of the construct into account in evaluating the interplay of stressors and religiousness.

Keywords: social change; religion; subjective well-being; stress-buffer; Poland

Introduction

Modern societies are faced with a host of economic, political, and cultural transformations of unprecedented pace and global scope (Raab et al., 2008; Rudel & Hooper, 2005). Macro-structural trends such as globalization, individualization, or economic crises substantially alter the conditions of individual development by reshaping the opportunities and constraints of the proximate contexts in which human development takes place (Bronfenbrenner, 1979; Tomasik & Silbereisen, 2009). This is particularly evident in the post-socialist societies of Central and Eastern Europe (Tomasik & Silbereisen, in press), which have undergone tremendous restructuring in recent years (e.g., Rakowska-Harmstone, 2006; White, Batt, & Lewis, 2007). Poland, which constitutes the focus of our present study, is a case in point. Within just two decades, the country has witnessed a host of economic and political transformations, such as the shift from a command economy to a free market economy, the development of democratic institutions, and the integration into the European Union (Balcerowicz, 1995; Góra & Zielińska, 2011; Wasilewski, 2003). Due to these processes, overlaid by more general trends of globalization, the Poles experienced profound change in their personal circumstances in various life domains, arguably most prominently so in the sphere of work. To briefly illustrate, the privatization of formerly state-owned companies, the spread of new technologies, and the deregulation and flexibilization of the labor market led, among other things, to growing and unequally distributed unemployment risks, a polarization of incomes for different levels of formal qualifications, a higher relevance of self-reliance and soft skills, a growth of the informal sector that lacks legal protection and social security, and increasing migration pressure (Bukowski, 2010; Golinowska, 2005; Plessz, 2009).

Recent research suggests that such macro-level societal changes manifest themselves in people's everyday lives in the form of individually perceived demands that index a new

state of affairs relative to what the individual was accustomed to and require some form of reaction; these demands act as stressors may impinge on SWB (e.g., Grümer & Pinquart, 2011; Tomasik & Silbereisen, 2009). Yet, although the significance of current social and economic change (SEC) for subjective well-being (SWB) is now widely acknowledged (Carlisle, Henderson, & Hanlon, 2009), there is still a surprising dearth of research that relates change on the societal level to individual-level outcomes. In particular, there is little research on moderating variables that increase or decrease the impact of SEC on the individual (Pinquart & Silbereisen, 2004). Stress research has long demonstrated that psychosocial resources can buffer the impact of stress on SWB (Lazarus & Folkman, 1987; Wheaton, 1985). Although it seems very likely that psychosocial resources exert a similar moderating function with respect to the impact of SEC on SWB, only very few studies have addressed this intersection (but see Grümer & Pinquart, 2011; Pinquart, Silbereisen, & Juang, 2004). Thus, to date relatively little is known about precisely which of an individual's characteristics or resources (and to what extent) allow him or her maintain good SWB in the face of the challenges posed by SEC.

The goal of this article is to contribute to closing this gap by addressing the potential stress-buffering role of religiousness, a psychosocial resource that has received growing attention in recent years. There is now ample evidence linking religiousness to better mental health and SWB (Moreira-Almeida, Neto, & Koenig, 2006). Even more importantly, there are strong indications that individuals, as suggested by insecurity theory (Norris & Inglehart, 2004), resort to religion for dealing with many of life's existential and economic insecurities, presumably because it offers them emotional benefits in dealing with these insecurities (Immerzeel & van Tubergen, 2011). A number of studies found that religiousness buffered the effect of a broad array of different stressors on mental health and SWB (e.g., Bjorck & Thurman, 2007; Bradshaw & Ellison, 2010; Shams & Jackson, 1993). Building on this

precedent, we argue that religiousness may also act as a protective factor in relation to the challenges individuals face due to current SEC. More specifically, we follow the central hypothesis that religiousness buffers the negative association between perceived work-related demands of social change and SWB. Given the profound change in the sphere of work and occupation on the one hand, and the continuing high religious vitality of its population despite an ongoing weakening of traditional patterns of Polish Catholicism (Bokser-Liwerant, 2002; Borowik, 2010) on the other, Poland constitutes a particularly apt and interesting case for this investigation. In the following, we first elaborate on the concept of perceived demands of social change in some detail. After discussing research on the intersection of religiousness and SWB, we present our rationale for linking SEC, religiousness, and SWB.

Theoretical Background and Research Questions

Demands of social change and their association with SWB

As mentioned above, the joint effect of the transformation to a market economy since 1990, technological progress, and globalization have had a profound impact on the labor market in Poland (Golinowska, 2005). Although relatively robust economic growth and decreases in formerly very high unemployment in recent years (rates dropped from about 19.5% in 2004 to 9.8% in 2008) led to economic gains, the current situation on the Polish labor market is characterized by flexibilization and deregulation, increasing volatility and higher susceptibility to fluctuations and external shocks due to the growing interdependence with the global economy, and generally higher structural uncertainty (Bukowski, 2010; Erlinghagen, 2008; Golinowska, 2005; Plessz, 2009).

As Silbereisen and colleagues (e.g., Pinquart & Silbereisen, 2004; Tomasik & Silbereisen, 2009) argue, such large-scale SEC in the macro-context does not affect all individuals alike. Rather, SEC becomes psychologically effective within the various micro-

contexts of individual development (such as the workplace or the family) where it *differentially* confronts individuals with new individually perceived demands that index situational imperatives to which the individual was not accustomed and needs to respond to; such demands thus represent the link between the macro- and micro-level. To illustrate, working-age individuals in Poland, as a consequence of the macro-structural changes delineated above, today more often face the demand of having to reckon with being laid off, having to work in atypical forms of employment and in jobs requiring lower qualifications than they possess, having to accept a job in the grey sector or having to look for a job abroad, and having to face a lack of security in career planning (e.g., Golinowska, 2005; Lewandowski et al., 2008; Plessz, 2009). These *work-related demand*s, as we will refer to them in the rest of this article, and in particular their accumulation over time, act as stressors and a risk factor for SWB for at least three reasons. First, they reflect increasing uncertainty about one's future prospect of success in the domain of work and occupation, which often has been shown to be a powerful stressor and to predict higher depression and anxiety in experimental research (Greco & Roger, 2003). Second, they represent a threat to the self (Obschonka, Silbereisen, & Wasilewski, 2011; Westerhof & Keyes, 2006). Third, a high load of work-related demands may overburden the individuals' adaptive capacities and thus endanger the successful mastery of important developmental tasks of young and middle adulthood, such as finding stable employment with a secure income and building a career (Tomasik & Silbereisen, 2009). According to Hobfoll (1989; 2002), however, stable employment and income, and the formation of a career represent valued resources that individuals seek to acquire in the course of negotiating these developmental tasks; a perceived threat to a valued resource or a lack of resource gain after investment of time and effort is assumed to produce stress.

Indeed, several studies have confirmed this view of demands as stressors. Grümer and Pinquart (2011) showed that an accumulation of perceived work-related, family-related, and public life-related demands was associated with higher depressive symptoms, controlling for a number of sociodemographic background variables. Other studies found demands of social change to be related to lower positive affect (Pinquart, Silbereisen, & Körner, 2009) and life satisfaction (Silbereisen & Tomasik, 2011) as well. We expected to replicate in our sample of Polish adolescents and adults the well-established association between higher loads of perceived work-related demands of social change and lower SWB. However, as will become clear in the following, in view of research on religion as a protective factor, there is good reason to assume that religious individuals will be less severely affected by these demands than their less religious counterparts.

Religiousness and SWB

In the past two decades, researchers have become increasingly interested in the linkage of religiousness – variously measured as religious practice (e.g., religious attendance), commitment and motivation, specific beliefs (e.g., the belief in an afterlife), or religious coping behaviors (e.g., pleading for divine intervention) – to psychosocial adaptation. While results are not always unequivocal, the vast majority of the several hundred empirical studies conducted in the field point to salutary effects of religiousness on a broad range of health-related and SWB-related outcomes (Moreira-Almeida et al., 2006; Pargament & Cummings, 2010). For instance, Smith, McCullough, and Poll (2003) found a negative correlation between religiousness and depression of $r = –.096$ in their meta-analysis across 147 independent studies. A similar result of $r = .10$ was obtained in another meta-analysis on the association between religiousness and psychological adjustment (e.g., life-satisfaction, self-actualization) by Hackney and Sanders (2003). Myers (2000) reported from the General Social Survey with data from $N = 34{,}706$ respondents that life satisfaction was related to

frequency of church attendance; 47% of those attending church weekly but only 28% of those attending less than monthly reported being “very happy”.

It is important to note that religiousness is a complex, multifaceted phenomenon comprising a cognitive, affective, behavioral, and social dimension, which may be differentially related to mental health and SWB (Hackney & Sanders, 2003), and perhaps also mediated through different pathways (e.g., social ties or active coping efforts). At times, specific manifestations of religiousness, such as spiritual struggles or religious doubts, may also have their downsides for some people in terms of SWB (Pargament, 2002). By and large, however, the above results, among many others, clearly speak to a small but reliable positive association between religiousness and SWB. Whereas the linkage between religiousness and SWB has mostly been examined in samples of US Protestants and often on samples of older people or in clinical samples, more recent research conducted in Europe demonstrates that the salutary effects of religion hold across denominations and national contexts and are, in general, stronger in more religious nations than in less religious ones (Gebauer, Sedikides, & Neberich, 2012; Nicholson, Rose, & Bobak, 2009). Thus, we expected to find a positive association between religiousness and SWB in our Polish sample as well.

Buffering effects of religiousness

A key tenet of stress research is that psychosocial resources, in addition to having a direct effect, can protect health and SWB against the adverse effects of stressors, a circumstance called “buffering effect” (Wheaton, 1985). Technically speaking, this means that resources act as moderators in the relation between stressors and these outcomes. There is mounting evidence that religiousness can exert such a buffering effect against the adverse consequences of stressors as diverse as physical illness (Wink, Dillon, & Larsen, 2005), negative life events (Bjorck & Thurman, 2007), unemployment (Shams & Jackson, 1993), discrimination (Bierman, 2006), and financial hardship (Bradshaw & Ellison, 2010;

Strawbridge, Shema, Cohen, Roberts, & Kaplan, 1998). The benefit religiousness offers in dealing with strains appears to be greater for more severe stressors that imply a loss of control (e.g., bereavement), but also applies to milder and more controllable types of stressors (Mattlin, Wethington, & Kessler, 1990).

Prior research has detailed mechanisms that may explain these stress-buffering effects of religiousness. First, religious beliefs, e.g., the conviction that God helps the faithful, may allow individuals to reappraise stressors in a more benevolent fashion (Maltby & Day, 2003) and provide a larger meaning for stressful events and personal circumstances, which in turn is associated with higher levels of SWB (Park, 2007). Second, religiousness encourages the cultivation of complex positive emotions, such as gratitude and forgiveness (Krause, 2009), and reduces worry and rumination (James & Wells, 2003). Recent experimental evidence even points to measurable biological markers of religiousness, namely reduced reactivity in the anterior cingulate cortex, a cortical system involved in the experience of anxiety and in self-regulatory processes (Inzlicht, McGregor, Hirsh, & Nash, 2009), and reduced cortisol levels in response to laboratory stressors (Tartaro, Luecken, & Gunn, 2005). Third, religiousness may reduce the impact of stressors because it is itself associated with a number of other resources relevant to overcoming strains, such as social support, self-esteem, or sense of mastery (Hill, 2010). Fourth, religiousness may foster active coping efforts and thus contribute to better psychological adaptation (Canada et al., 2006; Pargament & Park, 1995).

Although direct investigations of stress-buffering effects of religiousness by testing *Stressor* × *Religousness* interactions are rare (Wink et al., 2005), and although religiousness may at times exacerbate, rather than mitigate, the impact of certain stressors such as family-related stressors that conflict with values promoted by the church (Strawbridge et al., 1998), these findings suggest overall that religiousness is a widely, if not universally, applicable coping resource that offers benefits in dealing with virtually all kinds of stressful events and

conditions (Hood, Hill, & Spilka, 2009). This conclusion would be in line with the centerpiece of insecurity theory originally proposed by Norris and Inglehart (2004) that individuals turn to religion when confronted with life's myriad insecurities and uncertainties, be they economic or existential, and individual or contextual in nature, because religion offers them emotional benefits in dealing with these stressors (Immerzeel & van Tubergen, 2011).

In view of these findings, our most important research question is whether the benefits of religiousness apply to the challenges posed by SEC as well. We argue that when confronted with a high load of work-related demands, religious individuals may have a resource at hand that inoculates them against the detrimental impact of these demands, so that a given level of perceived work-related demands should diminish their SWB less strongly compared to non-religious individuals. We expected to find an interaction effect of demands and religiousness, such that religiousness buffers the negative effect of the demands on SWB. The perceived work-related demands in this study differ in their nature from stressors examined in earlier studies on the stress-buffering effects of religiosity in relation to other economic stressors in two important respects: First, they comprise subjectively perceived negative changes, rather than discrete events that were the focus of most prior research. Second, they are rooted in changes at the societal macro-level. The potential stress-buffering role of religiousness in relation to such a type of stressor has not been investigated in any prior research.

Hypotheses

Taken together, we tested the following three hypotheses:

Hypothesis 1: Higher religiousness is related to higher SWB.

Hypothesis 2: A higher load of perceived work-related demands of social change is inversely related to SWB.

Hypothesis 3: Religiousness buffers the negative effect of work-related demands on SWB.

Method

Sample

Data stem from the "Sociological and psychological determinants of rapid social changes" (PI: Jacek Wasilewski), a large-scale multi-theme survey on adult development and adjustment in times of SEC conducted as part of the international collaboration of and with financial support by the *Jena Study on Social Change and Human Development* (PI: Rainer K. Silbereisen; for details, see Silbereisen et al., 2006). Throughout the spring of 2009, trained interviewers from a professional survey institute conducted a total of 3,078 standardized computer-assisted personal interviews (CAPI) with 16- to 46-year-old respondents from two West Polish (Pomerania and Lower Silesia) and two East Polish administrative districts (Lublin and Subcarpathia). The age-range was chosen because it comprises the transitional stage to adulthood in which major developmental tasks such as forming a stable career are negotiated (Silbereisen et al., 2006). The initial sampling frame, stratified by community size, age, and gender, was drawn from the Universal Electronic System for Registration of the Population (PESEL) run by the Polish Ministry of the Interior and Administration. Interviewers initially approached the target individuals from the sampling frame, which contained 600 addresses of specific individuals. If the target person was not available, the interviewer looked for eligible individuals in the neighborhood following a random route procedure. Each address was approached only once. Less-educated, unemployed, and single individuals were slightly overrepresented in this sample compared with official registry data. Because our present analysis focused on work-related demands,

we only included participants who were gainfully employed at the time of the interview and excluded all those who were either unemployed, in school, or outside the labor market (e.g., housewives, people incapacitated for work). The resulting sample comprised n = 1,581 adolescents and adults between the ages of 16 and 46 years (M = 35.6; SD = 7.61), of which 56.0% were male (n = 886; female: 44.0%, n = 695). Almost half of the sample 44.4% (n = 702) had completed only elementary or basic vocational education, whereas 55.6% (n = 879) had completed secondary or tertiary education. Most were employed full-time (84.5%, n = 1336), 11.8% were self-employed (n = 187), and only 3.7% (n = 58) were employed part-time. As to marital status, 61.2% of the respondents (n = 968) were married or cohabiting, while 38.8% (n = 613) were single, divorced, or widowed.

Measures

Religiousness. We measured two different dimensions of religiousness. *Religious attendance* (i.e., organizational religious practice) was measured with one item asking respondents to indicate how frequently they attended masses and church services on an 8-point ordinal scale ranging from "never" to "several times a week." For the purpose of analyses, we computed two dummy variables signifying moderately frequent ("once a month" to "two or three times a month") and frequent ("every week" to "several times a week") attendance. Sporadic or non-existent attendance ("never" to "few times a year") served as the reference category. In the selected subsample, 44.9% (n = 710) respondents were frequent churchgoers, 26.6% (n= 421) were moderately frequent churchgoers, and 28.5% (n = 450) were in the reference group. As Hall, Meador, and Koenig (2008) reported, salutary effects of attendance are most consistently apparent when the measure is dichotomized between those who attend religious services at least once a week and those who do so less frequently, but there are some indications of a dose-response-relationship.

Therefore, using three categories seemed sufficiently parsimonious while still allowing the detection of possible dose-response-relationships. *Subjective religiosity* was measured with one item asking respondents to identify themselves on a 4-point scale as "non-believer," "having doubts in matters of faith," "believer," or "deep believer" ($M = 3.03$, $SD = .54$). We treated this measure as a continuous variable. The two measures of religiousness were only moderately correlated ($r = .50$, $p < .001$), substantiating the claim that they tap different dimensions.

Perceived work-related demands. Following past research on SEC (Tomasik & Silbereisen, 2009), we employed an established scale for measuring the individual-level manifestation of current SEC in the form of perceived work-related demands. Against the backdrop of a host of official statistics and current sociological literature on major trends of SEC affecting the majority of the working-age population, as well as qualitative and quantitative pretests, we devised an eight-item scale to capture the work-related demands that accrue from these trends. The topics concerned growing uncertainty with regard to career planning, increasing risks of job loss, and various negative changes in the quality of the workplace. Six of these items were originally constructed in the context of research in Germany but, as the sociological and economic literature on the topics (e.g., Bukowski, 2010; Golinowska, 2005; Lewandowski et al., 2008; Plessz, 2009; Rakowska-Harmstone, 2006) as well as recent comparative research (Obschonka et al., 2011) show, the trends captured therein equally apply to Poland; the other two items reflect trends specific to the Polish national context (growth of informal employment and increasing migration pressure; see Golinowska, 2005).

Table 1 shows the wording, mean endorsement, and standard deviations of each of the eight items. The interviewers first read the following introduction: "We are living in a period of rapid change. Globalization, new technologies, and other developments modify our

everyday life in a variety of different ways. Many of these changes have both positive and negative aspects." Participants were then prompted to "consider the past five years" and asked to rate each demand on a scale ranging from 1 ("does not apply at all") to 7 ("fully applies"). The five-year interval was chosen in order to focus on a time span during which significant change could occur and to minimize memory bias. By deliberately drawing on subjective perceptions of SEC, the concept of demands permits the assessment of inter-individual variation in the degree to which people are exposed to the consequences of major trends at the societal level. The mean endorsement of the full scale was $M = 3.87$ ($SD = 1.56$; Cronbach's Alpha = .91).

[Table 1 about here]

Subjective well-being. The three outcome measures selected for this study referred to the affective and the cognitive-evaluative dimension of SWB. Affective measures of SWB reflect relatively spontaneous and transient states, whereas cognitive-evaluative measures represent relatively stable aspects of various domains of life experience (Diener, 1994). As an indicator of the affective component, we used a Polish adaptation of the *Depressive Symptoms Scale* from the *Brief Symptom Inventory* (Derogatis, 1993). The scale consisted of six items asking respondents to indicate on a 7-point Likert scale (1 = "does not apply at all", 7 = "fully applies") to what degree they had suffered from depressive symptoms (feeling hopeless, worthless, blue, lonely; feeling no interest in things; having thoughts of suicide) within the past month. Higher mean values on the scale indicate higher depressive symptomatology, and hence lower SWB. As is to be expected for a sample from the normal population, the scale mean in the selected subsample was rather low ($M = 2.06$, $SD = 1.18$). Cronbach's Alpha was satisfactory ($\alpha = .91$).

The cognitive-evaluative dimension of SWB was measured with two single items. Using single item measures is common in well-being research, and these items have been

found to have satisfactory reliability and validity (Sandvik, Diener, & Seidlitz, 2009). The first of the items referred to *general life satisfaction* (7-point Likert scale; 1 = "very dissatisfied," 7 = "very satisfied") and asked respondents to indicate how satisfied they were at present with their life in general. On average, respondents turned out to be rather satisfied, with $M = 5.48$ ($SD = 1.22$). The other, domain-specific item referred to *work satisfaction* and asked respondents to indicate how satisfied they were at present with their work (7-point Likert scale; 1 = very dissatisfied, 7 = very satisfied). The mean endorsement of this item was $M = 5.34$ ($SD = 1.28$).

Socio-demographic controls. Control variables included age in years, gender, educational attainment, employment type, and marital status. These variables were included because they are typically correlated with both religiosity and SWB and may therefore act as possible confounders of the association between religiosity and SWB that have to be adjusted for. Table 2 shows the bivariate associations between all study variables.

[Table 2 about here]

Analytic strategy

To test our hypotheses, we set up a series of hierarchical ordinary least square regression models. In the first step, we tested Hypotheses 1 and 2 on the main effects of religiousness and work-related demands, respectively. In the second step, we added the *Demands* × *Religiousness* interaction in order to test whether, as predicted by Hypothesis 3, religiousness buffered the effect of the demands on SWB. A significant interaction with a coefficient in the opposite direction of the demands main effect would be indicative of a stress-buffering effect of religiousness (Wheaton, 1985). In the final step, we added the covariates to check whether the associations remained significant after controlling for possible third variables. We decided to run separate models for the two religiousness

measures because, as outlined, they tap different dimensions of religiousness that may have independent linkages with different dimensions of SWB (Greenfield, Vaillant, & Marks, 2009), and mutually controlling the religiousness measures might disguise potentially meaningful associations. In each of the models, the three outcome measures were regressed simultaneously on the predictors using structural equation modeling with AMOS 19 for Windows in order to avoid multiple testing. To reduce multicollinearity, all continuous variables were mean-centered prior to the analyses. Because the depressive symptoms scale was strongly skewed ($g = 1.34$), we checked whether using a logarithmically transformed scale would alter the pattern of results. As this was not the case, we proceeded with the original, untransformed scale.

Results

Table 3 and Table 4 provide the results of the multivariate models. Cell entries represent standardized regression coefficients (β). In the following, we will present the results in the order of the hypotheses.

[Tables 3 and 4 about here]

Our first hypothesis predicted that religiousness would be linked to better SWB. This was fully confirmed for our first measure of religiousness, religious attendance (Table 3, Model 1). Specifically, frequent attendance (i.e., once a week or more) was associated with lower depressive symptoms and higher life and work satisfaction. Moderately frequent attendance (i.e., once a month to two or three times a month) was also associated with lower depressive symptoms and higher work satisfaction but not with higher life satisfaction. Similar results emerged with regard to our second religiousness measure, subjective religiosity (Table 4, Model 1), which was significantly associated with higher life satisfaction

and higher work satisfaction, but not with lower depressive symptoms. In sum, results provided strong support for Hypothesis 1.

Our second hypothesis stated that a higher load of perceived work-related demands of social change would be associated with lower SWB. Results fully supported this expectation for all three outcome measures. Associations were similar in size but, as could be expected due to the theme of the demands, were somewhat lower for general life satisfaction than for the domain-specific measure of work satisfaction.

Our third and central hypothesis concerned the interactive influence of work-related demands of social change and religiousness on SWB. We started by looking at the results for our first measure of religiousness, religious attendance, in Table 3 (Model 2). In line with the hypothesis, there was a significant interaction on depressive symptoms, suggesting that when confronted with a high load of perceived work-related demands, the most frequent churchgoers reported fewer depressive symptoms than did individuals who attended sporadically or never. No such buffering effect emerged for the group of moderately frequent churchgoers. This pattern is displayed graphically in Figure 1. Post-hoc probing of the interactions revealed that the most frequent churchgoers differed significantly in depressive symptoms from the group of moderately frequent churchgoers ($t = 3.04$, $p < .05$) and the group of non-attendees ($t = 4.40$, $p < .001$) at the maximum value of 7 on the perceived demands scale, but not at the minimum value of 1 ($t = -.52$, n.s.; $t = -1.93$, n.s.). That is, religious attendance made a difference in terms of depressive symptoms at high but not low levels of perceived demands, as implied by the buffering hypothesis.

Regarding the second outcome, life satisfaction, there was also a significant *Demands* × *Frequent attendance* interaction, which was, however, in the direction opposite to our hypothesis, as depicted in Figure 2. Post-hoc probing revealed that the most frequent churchgoers had significantly higher levels of life satisfaction than either the group of

moderately frequent churchgoers ($t = 2.97$, $p < .01$) or the group of non-attendees ($t = 4.62$, $p < .001$) at the minimum value of perceived demands, but not at the maximum value ($t = -1.21$, n.s.; $t = -.80$, n.s.). In other words, the salutary effect of frequent attendance on life satisfaction disappeared as individuals were confronted with high levels of perceived work-related demands. Also contrary to Hypothesis 3, no significant buffering effect of religious attendance was evident on work satisfaction.

[Figures 1&2 about here]

Turning to our second measure of religiousness, subjective religiosity (Table 4, Model 2) significantly buffered the impact of the demands, confirming Hypothesis 3. Because the pattern was identical to the one reported above for religious attendance, we did not depict this result graphically. There was no significant *Demands* × *Religiousness* interaction with respect to the other two outcomes, life satisfaction or work satisfaction.

In sum, we found buffering effects of frequent religious attendance and subjective religiosity on depressive symptoms but not life or work satisfaction, providing partial support for Hypothesis 3.

Entering the socio-demographic control variables in the third step of the models did not substantially alter any of the above associations, demonstrating that the associations between demands and lower SWB, and religiousness and better SWB, did not merely reflect the influence of basic demographic factors. The share of variance explained by work-related demands, religiousness, and their interaction was relatively moderate overall, ranging up to about 9% for depressive symptoms and work satisfaction in the models with religious attendance, and being slightly lower for subjective religiosity as a measure of religiousness.

Discussion

Religiousness has been receiving growing interest in research on health and SWB as a protective factor against the adverse effects of stressors originating from a variety of sources (e.g., Pargament & Cummings, 2010). Despite burgeoning interest in the individual-level consequences of SEC, however, to our knowledge no study to date has addressed the potential stress-buffering role of religiousness in relation to stressors that arise from macro-level societal trends. This is surprising, given that much of contemporary social scientific theory ascribes to religion an important role in coping with all kinds of economic and existential insecurities and maintains that religiousness is particularly salient and beneficial to individuals facing economic or social precariousness (Nicholson et al., 2009; Norris & Inglehart, 2004; Stark & Bainbridge, 1996). The present study addressed this empirical lacuna. Building on recent psychological conceptualizations suggesting that macro-level SEC manifests in the everyday life of individuals in the form of individually perceived demands that act as stressors and may impinge on SWB (Grümer & Pinquart, 2011; Tomasik & Silbereisen, 2009), we set out to examine whether religiousness, in addition to having a positive direct effect on SWB, buffered the negative association between perceived work-related demands and SWB.

Several findings of our study are noteworthy. First, in line with previous research, we found that both of the dimensions of religiousness we assessed (i.e., religious attendance and subjective religiousness) were positively related to multiple dimensions of SWB (i.e., lower depressive symptoms, higher general life satisfaction, and higher work satisfaction). There were also some indications of a dose-response relationship between religious attendance and SWB, meaning that in particular those who attended every week, and to a lesser extent those who attended on a monthly basis, had higher SWB than sporadic or non-churchgoers. Importantly, whereas most research in this area has been conducted in the US, predominantly on samples of Protestants and older people (Flannelly, Ellison, & Strock, 2004), we surveyed

a sample of young to middle-aged Polish Catholics. We thus added to findings from more recent studies conducted across the globe suggesting that the salutary effects of religiousness hold across societal contexts and religious denominations, despite cross-national variations in effect size (Diener, Tay, & Myers, 2011; Gebauer et al., 2012; Nicholson et al., 2009). The beneficial relation of both measures of religiousness to the cognitive-evaluative measures of SWB (i.e., life and work satisfaction) was slightly stronger in size than to the affective measure (i.e., depressive symptoms), which is in line with findings from Hackney and Sander's (2003) meta-analysis. The domain-specific outcome of work satisfaction has rarely, if at all, been considered in research on the linkage of religion and SWB. A possible explanation for our finding that the salutary effects of religion also pertain to such a domain-specific outcome is that religiousness encourages the cultivation of positive emotions, such as gratitude and forgiveness (Krause, 2009) and provides other psychosocial resources, such as optimism or social support (Hill, 2010), which promote SWB very generally and across life domains.

Second, our analyses confirmed that perceived work-related demands, capturing the perceived changes in personal circumstances that accrue from current SEC, act as individual-level stressors that impinge on SWB (Tomasik & Silbereisen, 2009). Specifically, individuals who reported a higher load of work-related demands had higher depressive symptoms, lower life satisfaction, and lower work satisfaction; all associations were about equally strong. Thus, we were able to replicate in Poland earlier findings obtained with the same theoretical concept and almost identical assessment instruments in Germany (Grümer & Pinquart, 2011; Pinquart et al., 2009). The size of these associations was very similar to what was found in Germany, with β reaching up to .27 for depressive symptoms; this is quite substantial, given that SWB is a complex phenomenon with multiple determinants. Due to the correlational nature of our findings, we could not rule out the alternative explanation that individuals low

in SWB tend to evaluate their situation more negatively in general and hence perceive more of the negatively connoted work demands; however, a longitudinal investigation from Germany established that there are bidirectional influences of demands and SWB and vice versa, both of which are about equal in size (Körner, Silbereisen, & Cantner, 2010). In terms of Conservation of Resources Theory (COR; Hobfoll, 1989; 2002), the negative relationship the work-related demands bear on SWB can be understood in terms of the threat they pose to certain valued resources such as having stable employment and income or forming a career, which individuals seek to establish in the course of negotiating the central developmental tasks of young and middle adulthood in the domain of work (Tomasik & Silbereisen, 2009); in COR, a perceived threat to a valued resource, or a lack of resource gain after investment of time and effort is assumed to produce stress. In the context of studying the consequences of SEC, the concept of perceived demands seems especially valuable as it allows assessing interindividual variation in the degree to which people are affected by such threats to valued resources that accrue from SEC.

It is important to note at this point that although the work-related demands refer to negatively connoted changes, this is not to convey that SEC is entirely negative. Quite the contrary, SEC may also open up new opportunities and offer opportunities for personal growth; e.g., the transformation in Poland from socialist rule to pluralistic democracy brought with it a dramatic increase in personal freedom and political rights. However, our focus here was on negatively connoted changes because they are perceived as threatening (Obschonka et al., 2011) and constitute non-ignorable risk factors for SWB (e.g., Grümer & Pinquart, 2010).

The most novel finding of our study concerns the moderating effects of religiousness. In short, our analyses revealed that, even after controlling for a number of socio-demographic variables, both religious attendance and subjective religiosity buffered the impact of work-related demands of social change on depressive symptoms. In other words, highly religious

individuals experienced lower depressive symptoms than their less religious counterparts when confronted with a high load of work-related demands, meaning that religiousness acted as a protective factor against the effects of the demands. This result is in line with several earlier reports of buffering effects of religious involvement in relation to diverse stressors (e.g., Bjorck & Thurman, 2007; Shams & Jackson, 1993), although it differs from prior research in that the work-related demands which we considered as a stressor do not refer to specific events but primarily touch on perceived uncertainty. Hence, our finding adds to the few existing investigations showing that religiousness may not only moderate the impact of severe health-related stressors and negative life events, such as physical illness or the death of a spouse, which have largely been the focus of research so far, but may also fortify SWB against economic and social stressors that do not pose an existential threat, as for instance perceived financial hardship (Bradshaw & Ellison, 2010) or perceived discrimination (Bierman, 2006).

Against our expectations, religiousness did not buffer the negative effect of demands on the cognitive-evaluative measures of SWB, namely general life satisfaction and work satisfaction. Quite the contrary, the beneficial effect of religiousness on SWB diminished with a higher load of demands. That is, religious attendance contributed to a higher life satisfaction only as long as individuals faced no or only few demands in the domain of work. With a high load of demands, those who attended church no longer differed in terms of life satisfaction from those who did not attend. The beneficial effect of religiousness was no longer present here, although it is worth noting that religiousness did no harm to SWB.

This diverging pattern of interaction effects for the affective and cognitive-evaluative measures of SWB may at first glance seem puzzling. Two explanations can, however, be derived from the existing literature: First, research has shown that affective and cognitive-evaluative SWB have different precursors and set-points (Diener, Lucas, & Scollon, 2006)

and bear differential relations to external circumstances and life events (Luhmann, Hofmann, Eid, & Lucas, 2011). Even more importantly, affective SWB seems to be more strongly influenced by variables such as personality traits, coping strategies, mood regulation, or social support, than are cognitive-evaluative measures (Diener et al., 2006; Luhmann et al., 2011). The same may be true for the mechanisms that purportedly underlie the buffering effects of religiousness which we discussed earlier, namely the cultivation of positive emotions such as gratitude and forgiveness through religious rituals and teachings (Krause, 2009), active coping (Canada et al., 2006) and psychosocial resources such as optimism or social support (Hill, 2010). Due to the higher malleability of affective SWB, these mechanisms may be able to counteract the negative affective consequences of the perceived demands but fail to do so as regards more global (and generally more stable; see Luhmann et al., 2011) judgments of life satisfaction; in other words, there may be less traction for the mechanisms linking religiousness to better stress outcomes in the case of cognitive-evaluative well-being. A second explanation of the differential interactions focuses on the high life satisfaction of religious individuals at low levels of perceived demands: At low levels of perceived demands, positive emotions, high optimism, and especially social support perceived in abundance but not actually required or activated to deal with the demands of life may boost the evaluation of one's life circumstances, maybe even to some unrealistic degree. When facing a high load of demands, however, positive emotions may lead to an increased awareness of one's "miserable" situation and of the risks associated with it (see Aspinwall, 1998), optimistic people may become increasingly realistic (see Schneider, 2001), and the detrimental aspects of received social support (in terms of feeling shame and being dependent on someone who is better off (Rook, Sorkin, & Zettel, 2004) may outweigh the benefits of higher perceived social support. All these factors contribute to a lower cognitive-evaluative SWB but are not necessarily related to its affective aspects. As we were not able to test these

interpretations on an empirical basis, further research is needed in order to do so and to ascertain whether these interpretations are specific to the stressors we examined. At any rate, our results underscore the importance of taking into account the multidimensionality of religiousness and SWB in evaluating the interplay of stressors and religiousness.

Three key limitations of our study bear mentioning. First and foremost, the cross-sectional nature of the data precludes any form of causal interpretation of the reported associations. However, longitudinal studies on the association of religiousness and SWB have typically yielded results similar to cross-sectional studies (Flannelly et al., 2004), and our measure of demands referred to perceived negative changes in personal circumstances that had occurred over the past five years, which, even though it is not a prospective longitudinal assessment, comes closer to the idea of assessing the interplay of stressors and resources as a process evolving over time. Second, because we were interested in whether religiousness buffered work-related demands, we restricted our sample to employed individuals, and our sample covered a limited age-range of 16-46 years. Because these restrictions were by design, we believe they do not call into question the main conclusions of our study, but our findings regarding the associations of social-change-related demands and religiousness with SWB may not apply in the same way to individuals who are not actively participating in the labor market, and to older individuals. Third, although one strength of our study is that we employed multiple measures to tap different dimensions of both religiousness and SWB, we had to rely partly on single item indicators, as the desire for more comprehensive assessment had to be balanced against limitations of questionnaire space and interview time. However, single-item measures of SWB have been shown to have satisfactory reliability and validity (Sandvik et al., 2009). It is also common practice to use single item measures of religious attendance, and these measures even seem to yield the most consistent associations with health outcomes (Hall, Meador, & Koenig, 2008), even though we cannot rule out the

possibility that the higher measurement error of our single items measure limited our chances of finding more than three out of six significant interactions.

These caveats notwithstanding, our study makes several contributions to the literature on religiousness and SWB. First, we extended the findings on the linkage between religiousness and SWB to Poland, which is special with regard to the continuing high religious vitality of its population and which has seldom been considered by research in the field. Second, we tested not only direct but also moderating effects of religiousness, which is still rarely done in research on religion and constitutes a more rigorous test of the claim that religiousness is a resource for health/SWB. Third, we examined the potential stress-buffering role of religiousness for the first time in relation to stressors that accrue from macro-level SEC.

Future research should seek to generalize our findings to other societal contexts as well as other religious denominations. Although in this study we focused on Poland with its particular economic situation, people from other nations around the globe are facing similar economic challenges due to the impact of globalization or the recent financial crises (Buchholz et al., 2009; Kalleberg, 2009). Given that the strength of the association between religiousness and SWB seems to be higher in more religious countries (e.g., Diener et al., 2011), it remains to be seen whether the pattern of results we found also holds in less religious and more religiously diverse countries. Furthermore, to the extent that social change is a diverse and ubiquitous phenomenon and we focused exclusively on its work-related aspects, it would be interesting to examine the purported stress-buffering/exacerbating role of religiousness in relation to demands in other life domains. Finally, future studies should elucidate the possible mechanisms behind the salutary effects of religiousness in relation to stressors in general, and social change specifically. As mentioned earlier, active coping might be one such mechanism that has received relatively little

attention and focusing on it would allow integrating the study of religion into a broader stress-coping framework (Pargament & Park, 1995).

Overall, the answer to the question whether religiousness acts as a protective factor for SWB in times of SEC is a qualified "yes". Religiousness did indeed bear a salutary relationship to all measures of SWB and buffered the association of work-related demands of social change on depressive symptoms. However, it did not buffer the impact of these demands on the cognitive-evaluative measures of SWB, i.e., life and work satisfaction. Clearly, as SEC continues to pose new challenges for individuals in various domains of life that may overtax their resources and impinge on health and SWB, the role of religiousness as a foundation of strength and resilience – both individually and collectively – warrants further scrutiny. Understanding how religiousness helps individuals to cope with the many challenges they face may provide an important pathway towards promoting adaptive development in the future.

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Appendix

Table 1

Mean endorsement of all single items in the work demand scale

When considering the past five years…	M	SD
…it has become more difficult to plan my career path.	4.30	1.85
…today, I have to be prepared more for the possibility of reluctantly only working part-time instead of full-time.	3.80	2.05
…the risk of losing my job has increased.	3.96	2.02
…my career plans were often hindered by unforeseen events and circumstances.	3.65	1.96
…it is now more likely that I will be forced to accept a job requiring lower qualifications than those I have.	3.91	1.98
…there are currently fewer job opportunities for me.	4.12	1.97
…I have to be prepared for the possibility of looking for a job abroad.	3.55	2.05
…I have to be prepared for the possibility of taking a job in “grey sector”.	3.67	2.12

Table 2

Correlations of the study variables

Variables	1	2	3	4	5	6	7	8	9	10
1. Work-related demands	1									
2. Religious attendance	-.10***	1								
3. Subjective religiosity	-.16***	.50***	1							
4. Depressive symptoms	.26***	-.15***	-.08**	1						
5. Life satisfaction	-.19***	.18***	.17***	-.27***	1					
6. Work satisfaction	-.27***	.17***	.17***	-.20***	.52***	1				
7. Age	-.11***	.05*	.11***	.03	-.08**	-.08**	1			
8. Gender[a]	.03	-.14***	-.10**	-.09**	-.01	-.07**	.00	1		
9. Education[b]	-.04	-.03	-.12**	-.05*	-.01	.04	-.05*	-.18***	1	
10. Marital status[c]	-.13***	.15***	.11***	-.13***	.10***	.02	.48***	-.07**	-.02	1
11. Occupational status[d]										
part-time	.06*	-.07**	-.08**	.09**	-.05*	-.07*	-.02	-.09**	.05*	.02
self-employed	-.14**	.03	.08**	.00	.14**	.15**	.06*	.02	-.03	.08*

Note. N = 1,581; [a]Coding: 1 = male; [b]Coding: 1 = secondary vocational or higher; [c]Coding: 1 = married; [d]Reference: employed full-time

*p < .05. **p < .01 ***p < .001

Table 3

Associations of religious attendance and work-related demands with SWB

	Depressive Symptoms			**Life Satisfaction**			**Work Satisfaction**		
Variable	M1	M2	M3	M1	M2	M3	M1	M2	M3
Perceived work-related demands	.252***	.338***	.321***	-.165***	-.085	-.071	-.252***	-.240***	-.227***
Religious attendance									
moderately frequent[a]	-.078**	-.080**	-.074**	.031	.035	.028	.074**	.076**	.072*
frequent[b]	-.119***	-.121***	-.122***	.177***	.178***	.163***	.151***	.152***	.142***
Demands × moderately frequent attendance		.000	.003		-.032	-.031		-.017	-.016
Demands × frequent attendance		-.120**	-.105*		-.089*	-.091*		-.006	-.013
Education[c]			-.060*			-.008			.017
Age			.137***			-.184***			-.124***
Gender[d]			-.126***			.019			-.046
Marital status[e]			-.170***			.144***			.020
Occupational status[f]									
Part-time			.072**			-.030			-.047*
Self-employed			.050*			.102***			.102***
Adjusted R^2	.079	.086	.132	.061	.064	.104	.088	.088	.132

Note. N = 1,581; [a]attendance "once a month" to "two or three times a month"; [b]attendance "every week" to "several times a week"; [c]Reference: elementary or basic vocational; [d]Reference: female; [e]Marital status "married"; reference: "single," "widowed," and "divorced"; [f]Reference: employed full-time;
*p < .05. **p < .01 ***p < .001

Table 4

Associations of strength of faith and work-related demands with SWB

	Depressive Symptoms			**Life Satisfaction**			**Work Satisfaction**		
Variable	M1	M2	M3	M1	M2	M3	M1	M2	M3
Perceived work-related demands	.268***	.288***	.279***	-.165***	-.158***	-.144***	-.246***	-.245***	-.235***
Strength of faith	-.014	-.044	-.055*	.144***	.133***	.130***	.132***	.130***	.128***
Demands × strength of faith		-.097***	-.078**		-.035	-.036		-.008	-.014
Education[a]			-.078*			-.001			.031
Age			.134***			-.194***			-.135***
Gender[b]			-.122***			.019			-.045
Marital status[c]			-.167***			.150***			.026
Occupational status[d]									
Part-time			.069**			-.028			-.044
Self-employed			.070**			.100***			.108***
Adjusted R^2	.073	.081	.128	.056	.057	.100	.089	.089	.121

Note. N = 1,581; [a]Reference: elementary or basic vocational; [b]Reference: female; [c]Marital status "married"; reference: "single,, "widowed" and "divorced"; [d]Reference: employed full-time;
*p < .05. **p < .01 ***p < .001

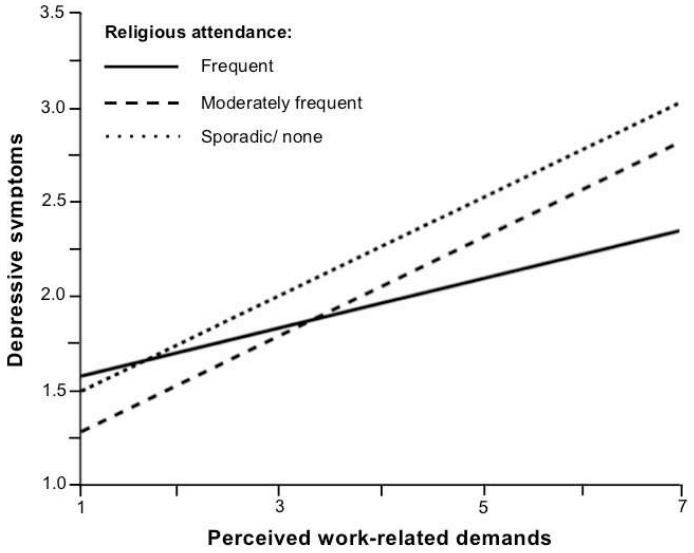

Figure 1. The interactive influence of work-related demands and religious attendance on depressive symptoms.

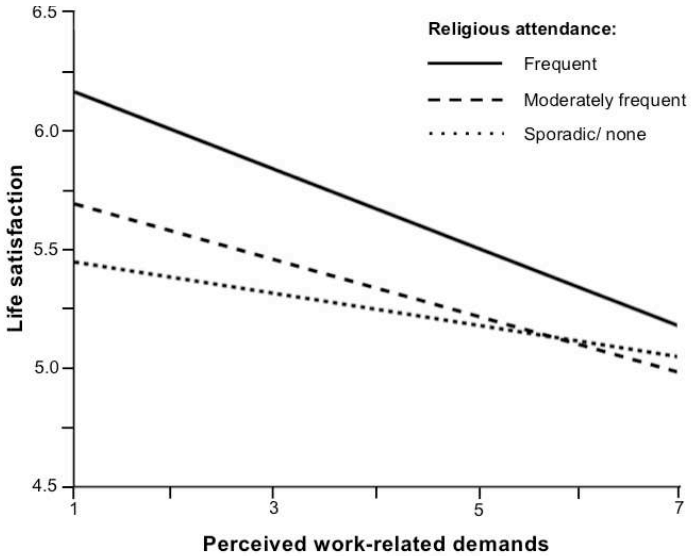

Figure 2. The interactive influence of work-related demands and religious attendance on general life satisfaction.